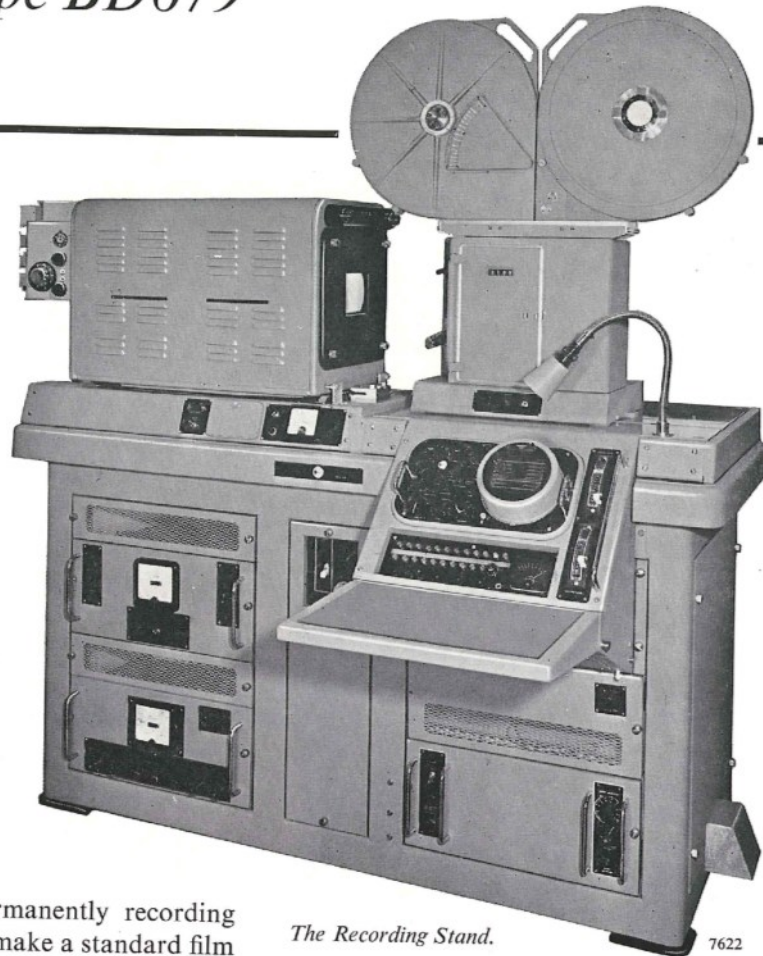




16 mm Film Recording Channel Type BD679



The Recording Stand.

THE BEST METHOD of permanently recording television programmes is to make a standard film of the television picture. This method has the important advantages of interchangeability, ease of viewing and simplicity of editing. When supplied with a standard video signal input and driving pulses, the Type BD 679 recording channel will produce a high-quality recording of the signal on standard 16 mm film using a fast pull-down camera. Facilities are provided for recording the sound on separate 16 mm perforated magnetic tape. Alternatively, the camera can be supplied with optical sound facilities, and the sound can then be recorded on the same film as the vision.

The cathode-ray tube used in the recording channel operates with sufficient brightness to

enable relatively cheap blue-sensitive film to be used. Gamma correction and top correction circuits are included, and positive recordings can be made.

When recording from a remote composite video signal the local synchronising generator must be locked to this remote source by a Type BD 658 Locking Unit (see page 175). Alternatively, a Flywheel Sync. Panel Type 2556 can be used to generate all the driving pulses for the recording channel from a composite video signal.

The channel consists of the recording unit shown above and two 6-ft cabinets of equipment.

Recording channel stand carrying

Recording monitor	Fast pull-down camera
Regulated power supply	Camera drive chassis
	Control desk
Auxiliary power supply	

Rack mounted equipment

Flywheel sync. panel
Monitoring and switching equipment
16 mm magnetic recorder

The power supplies and the drive chassis are built into the base of the recording channel stand, which forms a rigid mounting for the monitor, monitor head and camera. The built-in units can be withdrawn on runners for servicing.

Recording monitor. The high-quality picture is reproduced on a flat-screen CRT which is mounted in this unit. The tube mounting is adjustable so that customers may use tubes of their own choice of between 5 and 10½-inch (12 and 27 cm) diameter.

16 mm fast pull-down camera. The outstanding feature of the camera is the simple but ingenious mechanism by which each frame of the film is pulled down in 2 milliseconds at the blanking

period. The pull-down mechanism can be quickly detached from the camera and replaced. The unit is available in editions for 50 c/s or 60 c/s operation.

Camera drive chassis. The camera drive chassis serves to drive the camera and sound recorder in synchronism with the television system. The system therefore need not be locked to the mains frequency.

Control desk. This includes a 5-inch waveform monitor for checking signal levels throughout the channel, a switching unit providing selection of eight vision and four sound inputs, together with sound and vision controls.

Flywheel sync. panel and monitoring and switching equipment are assembled in a standard rack. These items make the channel fully self-contained with regard to test and monitoring facilities.

16 mm magnetic recorder. The complete recorder is provided in the form of six units mounted in a second standard rack and accepts signals at high level from a studio system.

DATA SUMMARY

- Inputs:** (a) 95–117 V 60 c/s or 200–244 V 45–60 c/s AC supply (consumption 2 kVA approx.)
 (b) Composite or non-composite vision signal ± 6 dB relative 1 V peak to peak composite signal.
 (c) Line and field driving pulses.
 (d) Composite sync. pulses.

Monitor display: Positive or negative. CRT of between 5 in. (13 cm) and 10½ in. (27 cm) diameter.

Monitor deflection: Vertical, 30°. Horizontal 40°.

Monitor scan linearity: Positional error of any point in the raster not more than 1½% of picture height and width.

Frequency response (without correction): LF, maintained by clamp. HF within ± 0.2 dB to 7 Mc/s, -3 dB at 8.5 Mc/s.

Aperture correction: Up to 6 dB at 3 Mc/s, 10 dB at 5 Mc/s, 12 dB at 7 Mc/s.

Minimum amplifier gamma: 0.6.

Black stretch: A max. gain of 10 times up to 50% peak white output, operating from blanking level.

White stretch: A max. gain of 4 times down to 50% peak white.

Camera pull down time: 2 ms.

Film magazine capacity: 2400 ft each.

Overall dimensions:

	Height	Width	Depth	Weight
<i>Recording stand</i>	6 ft (183 cm)	5 ft 4 in. (163 cm)	3 ft 10 in. (76 cm)	950 lb (386 kg)
<i>Vision equipment rack</i>	6 ft (183 cm)	23½ in. (60 cm)	29½ in. (75 cm)	365 lb (166 kg)
<i>Sound recording rack</i>	6 ft (183 cm)	23½ in. (60 cm)	29½ in. (75 cm)	340 lb (154 kg)

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